



UNITED STATES PATENT AND TRADEMARK OFFICE

**Inventor(s):** Hammond, Neil A.  
**Appln. No.:** 10/796,786  
**Filing Date:** 03/09/2004  
**Title:** LOW SUGAR HONEY

**Examiner:** Wong, Leslie A.  
**Group Art Unit:** 1794  
**Confirmation No.:**  
**Customer No.:** 25764  
**Docket No.:** 83285-376263

Mail Stop Appeal Brief – Patents  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

I CERTIFY THAT THIS PAPER (ALONG WITH ANY REFERRED TO AS BEING ATTACHED OR ENCLOSED) IS BEING TRANSMITTED TO THE COMMISSIONER FOR PATENTS, P. O. BOX 1450, ALEXANDRIA, VA 22313-1450 ON SEPTEMBER 20, 2010, VIA FIRST CLASS US MAIL.

/Denise M. Kettelberger/  
Denise M. Kettelberger

**APPEAL BRIEF**

The Appellant filed a Notice of Appeal on February 19, 2010 from the Final Office Action dated October 19, 2009. The arguments in this brief are responsive to the status and disposition of the pending claims as represented by the Final Office Action mailed on October 19, 2009. This Appeal is proper because the present application includes claims that have either been twice rejected or finally rejected. The Appellant's Brief in support of this Appeal includes each section required by 37 C.F.R. §41.37.

The Commissioner is authorized to charge our Deposit Account No. 06-0029 in payment of the Appeal fee and the 5 month extension of time fee due under 37 C.F.R. § 1.136 and requested for this Appeal Brief. Should any additional fee be required, the Commissioner is authorized to charge our Deposit Account No. 06-0029 and notify us of the same.

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02 FC:2402 270.00 DA

**1. REAL PARTY IN INTEREST**

The real party in interest is T.W. Burleson & Son, the assignee of record.

**2. RELATED APPEALS AND INTERFERENCES**

There are no known related appeals or interferences.

**3. STATUS OF CLAIMS**

Claims 39-52 stand rejected. Claims 41-52 are the subject of this appeal. Claim 1-38 were canceled. No claims have been allowed.

**4. STATUS OF AMENDMENTS**

The Appellant filed a Notice of Appeal on February 19, 2010 in response to the Final Office Action dated October 19, 2009. There are no filed but un-entered claim amendments.

**5. SUMMARY OF CLAIMED SUBJECT MATTER**

The claims are directed to honey compositions comprising a specific % of natural honey and an extender molecule, where the honey composition maintains taste, color, and viscosity of natural honey.

Claim

**6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

***Ground of Rejection 1:*** Whether claim 39 is obvious under 35 U.S.C. § 103(a) over Japanese Patent to Shimizu et. al., Patent No. JP 01-181751 (“Shimizu” or “the Shimizu patent”) in view of Staub et.al., U.S. Patent No. 4379782 (“Staub” or “the Staub patent”).

***Ground of Rejection 1:*** Whether claim 41 is obvious under 35 U.S.C. § 103(a) over Japanese Patent to Shimizu et. al., Patent No. JP 01-181751 (“Shimizu” or “the Shimizu patent”) in view of Staub et.al., U.S. Patent No. 4379782 (“Staub” or “the Staub patent”).

***Ground of Rejection 2:*** Whether claim 42 is obvious under 35 U.S.C. § 103(a) over Japanese Patent to Shimizu et. al., Patent No. JP 01-181751 (“*Shimizu*” or “the *Shimizu* patent”) in view of Staub et.al., U.S. Patent No. 4379782 (“*Staub*” or “the *Staub* patent”).

***Ground of Rejection 3:*** Whether claim 52 is obvious under 35 U.S.C. § 103(a) over Japanese Patent to Shimizu et. al., Patent No. JP 01-181751 (“*Shimizu*” or “the *Shimizu* patent”) in view of Staub et.al., U.S. Patent No. 4379782 (“*Staub*” or “the *Staub* patent”).

***Ground of Rejection 4:*** Whether claim 45 is obvious under 35 U.S.C. § 103(a) over Japanese Patent to Shimizu et. al., Patent No. JP 01-181751 (“*Shimizu*” or “the *Shimizu* patent”) in view of Staub et.al., U.S. Patent No. 4379782 (“*Staub*” or “the *Staub* patent”).

## ARGUMENT

### Ground of Rejection 1: Rejection of Claims 41 Under 35 U.S.C. § 103(a) Over Shimizu in view of Staub

Independent claim 41 recites a honey composition comprising about 40 to about 65 weight percent of natural honey; and about 35 to about 50 weight percent of an extender selected from the group consisting of a C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof, where honey present in the composition consists of *natural* honey and the composition comprises less than 25% fructose. All elements of the claim are supported by the specification, at least at the positions shown below.

Page	Lines	Claim 41 Elements
2	20-25	40 to about 65 weight percent of natural honey;
7	20	
2	20-25	about 35 to about 50 weight percent of an extender
3	13-35	C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof,
2	20-25	wherein honey present in the composition consists of natural honey, and
4	7-12	wherein the composition comprises less than 25% fructose.

The Examiner's rejection is premised on a substitution of the claimed extender groups for the fructo-oligosaccharides of *Shimizu*; and on the substitution of the claimed natural honey for the refined honey of *Shimizu*. *Shimizu* fails to teach or suggest a honey composition with the claimed amount of natural honey, but rather teaches away from a natural honey composition. *Shimizu* fails to teach or suggest a honey composition comprising the claimed extender molecules that are at most slowly metabolizable to achieve the purpose of the claimed diatetic/diabetic compositions, but rather teaches combining honey with an easily digestable fructooligosaccharide. Neither substitution meets the requirements and purpose of the claimed invention.

*Shimizu* discloses a honey composition combines “pure” honey with “refined” honey (honey that has been deodorized and bleached). The percentage of “pure” honey cited by the examiner is not 50% of the composition, but is rather is the combined weight of both “refined” and “pure” honey in the mixture (page 6, first full paragraph, lines 6-12). Rather than teaching a product with 50% *natural* honey, *Shimizu* teaches the total amount of “pure” honey cannot exceed 50%: “if the amount of pure honey exceeds 50%, the pH value of the honey is lowered, and not only the effects of the oligosaccharides are suppressed, but also by heating the quality of the honey may change and the oligosaccharides may decompose.” (*Id.*)

At page 4 of the translation, *Shimizu* teaches “making a mixture of pure honey bleached and deodorized by activated charcoal and 10-50 wt % of pure honey and then adding 10 – 40 wt% of oligosaccharides to the mixture”. Assuming maximum pure honey (50 wt %) and the minimum amount of oligosaccharides (10 wt %), the final composition can contain no more than 45 wt % of the pure honey, and given the amount of glucose and fructose naturally present in natural honey, the composition of *Shimizu* does not teach or suggest a final honey product comprising less than 25% fructose.

At page 5 of the translation, *Shimizu* explains mixing refined with pure honey raises the pH to 5, and the high pH impacts the properties of the honey, including stability. At page 6, *Shimizu* explains that the “ratio” of pure honey to refined honey must be less than 50% [so final product less than 45%] to avoid reducing pH. *Shimizu* exemplifies compositions comprising 0% pure honey (Example 1) or 18% pure honey (Example 2) and honey compositions comprising 0% natural honey, 83% refined honey and 17% FOS extender (Ex. 1) or 18% natural honey, 73% refined honey, and 9% FOS extender (Ex. 2).

*Shimizu* differs not only in the use of refined honey, but also in the extender molecules utilized. *Shimizu* discloses “... manufacturing and sterilizing oligosaccharide-containing honey, which is obtained by adding fructooligosaccharides to honey, which is **easily digested** and absorbed.” (page 2 of the translated Japanese Patent application) None of the claimed extender molecules are fructooligosaccharides that are easily digested and absorbed. Such extender molecules go against the purpose and intent of the claimed product, a dietetic or diabetic honey

composition that is lower in fructose and glucose than natural honey, but retains the organoleptic properties of natural honey.

As stated in the Response dated August 27, 2008, at least because the claimed honey composition utilizes extender molecules that are not normally present in honey compositions and which are not easily digested in the human digestive system, *Shimizu* cannot predict that a honey composition according to the claims would provide a suitable honey product for use as a dietetic or diabetic honey product. *Shimizu* also teaches against the use of the claimed natural honey, as discussed above, and cannot be said to predict the utility of the claimed natural honey.

The secondary reference, *Staub* does not disclose any honey compositions. *Staub* discloses products containing polysaccharides or polyols “in excess of 10% by dry weight” and does not disclose honey products. In contrast, *Staub* discloses that polysaccharides and polyols induce diarrhea because they are not metabolized, and use of such fibers renders foods undesirable with some exceptions (See *Staub* Column 3, lines 27-37).

Accordingly Claim 41 is not taught or suggested by the primary reference, *Shimizu*, alone or in combination with the secondary reference, *Staub*.

**Ground of Rejection 2: Rejection of Claims 42 Under 35 U.S.C. § 103(a) Over Shimizu in view of Staub**

Independent Claim 42 recites a honey composition comprising about 40 to about 65 weight percent of natural honey; and about 35 to about 50 weight percent of an extender selected from the group consisting of a C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof, where honey present in the composition consists of natural honey and the composition comprises less than 25% fructose, but also limits the composition to comprise less than 25% glucose.

Page	Lines	Claim 41 Elements
2	20-25	40 to about 65 weight percent of natural honey;
7	20	
2	20-25	about 35 to about 50 weight percent of an extender
3	13-35	C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof,
2	20-25	wherein honey present in the composition consists of natural honey, and
4	7-12	wherein the composition comprises less than 25% fructose.

For all the reasons discussed above for claim 41, Claim 42 is not taught or suggested by the primary reference, *Shimizu*, alone or in combination with the secondary reference, *Staub*.

**Ground of Rejection 3: Rejection of Claims 52 Under 35 U.S.C. § 103(a) Over Shimizu in view of Staub**

Independent claim 52 specifies the honey composition to comprise about 50% natural honey, about 40% of an extender selected from the group consisting of a C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof, also requires the composition to comprise about 10% water.

Page	Lines	Claim 41 Elements
2	20-25	About 50% natural honey;
7	20	
2	20-25	about 40% extender
3	13-35	C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof,
7	20	10% water

For all the reasons discussed above for claim 41, Claim 52 is not taught or suggested by the primary reference, *Shimizu*, alone or in combination with the secondary reference, *Staub*.

**Ground of Rejection 41: Rejection of Claims 45 Under 35 U.S.C. § 103(a) Over Shimizu in view of Staub**

Claims 41, 42, and 52 are thus patentable over the prior art of record. And because they depend from claim 42, claims 43-51 are necessarily patentable for at least the same reasons. The Appellant respectfully requests reversal of the rejections of claims 41-52.

**CONCLUSION**

The Appellant respectfully requests that the Board reverse the outstanding rejections of the foregoing claims and instruct the Examiner to issue a Notice of Allowance of all pending claims.

Respectfully Submitted,

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Dated: September 20, 2010

**CLAIMS APPENDIX**

1-38. Cancelled.

39. (Rejected) A honey composition comprising:

- (a) about 40 to about 65 weight percent of natural honey; and
- (b) about 35 to about 50 weight percent of an extender selected from the group consisting of a C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof;

wherein honey present in the composition consists of natural honey and contains no added fructose; and

wherein the taste, color, and viscosity of the honey composition approximates that of the natural honey.

40. (Rejected) The honey composition of claim 39, consisting essentially of:

- (a) about 40 to about 65 weight percent of natural honey;
- (b) about 35 to about 50 weight percent of an extender selected from the group consisting of a C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof; and
- (c) water.

41. (Rejected) A honey composition, comprising:

- (a) about 40 to about 65 weight percent of natural honey; and
- (b) about 35 to about 50 weight percent of an extender selected from the group consisting of a C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof;

wherein honey present in the composition consists of natural honey, and

wherein the composition comprises less than 25% fructose.

42. (Rejected) The honey composition of claim 39, comprising:
  - (a) about 40 to about 65 weight percent of natural honey;
  - (b) about 35 to about 50 weight percent of an extender selected from the group consisting of a C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof;  
wherein honey present in the composition consists of natural honey, and  
wherein the composition comprises less than 25% fructose and less than 25% glucose.
43. (Rejected) The honey composition of claim 42, comprising from about 40 to about 50 weight percent of natural honey.
44. (Rejected) The honey composition of claim 42, comprising about 50 weight percent of natural honey.
45. (Rejected) The honey composition of claim 42, comprising a pH of about 4.
46. (Rejected) The honey composition of claim 42, having a viscosity of about 8,500 to 11,000 centipoise.
47. (Rejected) The honey composition of claim 42, comprising a C2-6 polyol selected from the group consisting of mannitol, sorbitol, xylitol, dulcitol, arabinitol, and mixtures thereof.
48. (Rejected) The honey composition of claim 47, wherein the C2-6 polyol is sorbitol.
49. (Rejected) The honey composition of claim 42, comprising dietary fiber.
50. (Rejected) The honey composition of claim 49, wherein the dietary fiber is oat bran.
51. (Rejected) The honey composition of claim 49, wherein the dietary fiber is obtained from psyllium seed.

52. (Rejected) A honey composition comprising about 50% natural honey, about 40% of an extender selected from the group consisting of a C2-6 polyol, raffinose, stachyose, non-metabolizable dietary fiber, and mixtures thereof; and about 10% water.

**EVIDENCE APPENDIX**

1. Declaration of Neal A. Hammond, Submitted June 16, 2009;

**RELATED PROCEEDINGS APPENDIX**

None.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:

NEAL A. HAMMOND

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S Group Art Unit: 132

Serial No.: 07/784,891

S

Filed:

S Examiner:

For: LOW SUGAR HONEY

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DECLARATION OF NEAL A. HAMMOND

I, Neal A. Hammond, of Baton Rouge, Louisiana

1. I am an inventor of the above-identified patent application.

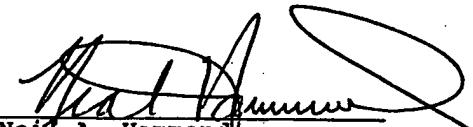
2. I have worked with natural honey and attempted to extend natural honey by the addition of various extender molecules. Honey is an extremely difficult product to duplicate. The high viscosity, thixotropic characteristics, clarity, color and taste are factors which effect the overall acceptance of a blended honey product. Using the extender molecules disclosed in the patent specification, a low calorie, reduced-glucose honey product was made which mimics natural honey in flavor, clarity, color, viscosity, and texture.

3. Previous attempts by others to introduce extender or thickening agents to natural honey have been unsuccessful due to the incompatibility of such agents with the high viscosity and high solids contents of honey. Prior to the present invention, extended honey products have been undesirable because of their being stringy, cloudy, slimy or slippery, and having a low viscosity as compared with natural honey. Previously known blended honey products having satisfactory taste, texture, viscosity, etc., have required the addition of fructose to the composition. The present invention is the first extended honey product which avoids these undesirable characteristics and provides an extended, reduced-sugar honey product having

desirable organoleptic properties similar to that of natural honey.

I hereby declare that all of the statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

17 February 1992  
Date

  
Neil A. Hammond